Southern Area
Fuels and Fire Behavior Advisory

Subject: **Extremely dry conditions in many portions of the Southern Region have created the potential for problematic Fire Behavior.**

Discussion: La Nina events and persistent high pressure systems throughout the course of the spring and early summer have combined to bring exceedingly dry conditions to the Southeast. Due to these patterns, rainfall deficit records are being set in many areas. New record levels for dryness indices such as ERC and KBDI are occurring throughout the Southeastern portion of the Geographic Area and these trends are moving northward through the Appalachians .

All classes of dead fuels and most live herbaceous, shrub, and foliar fuels are available for rapid fire spread due to this intense drying. All new ignitions and unburned islands of current fires in this area should be considered potentially explosive situations from a fire behavior perspective.

Deep drying at the surface and subsequent drops in water table moisture have allowed for the entire surface layer to become available for deep burning. This deep burning has affected the potential for hold over fires and re-burns, and the ability of suppression forces to control the edges of going fires.

Concerns to Firefighters and the Public:

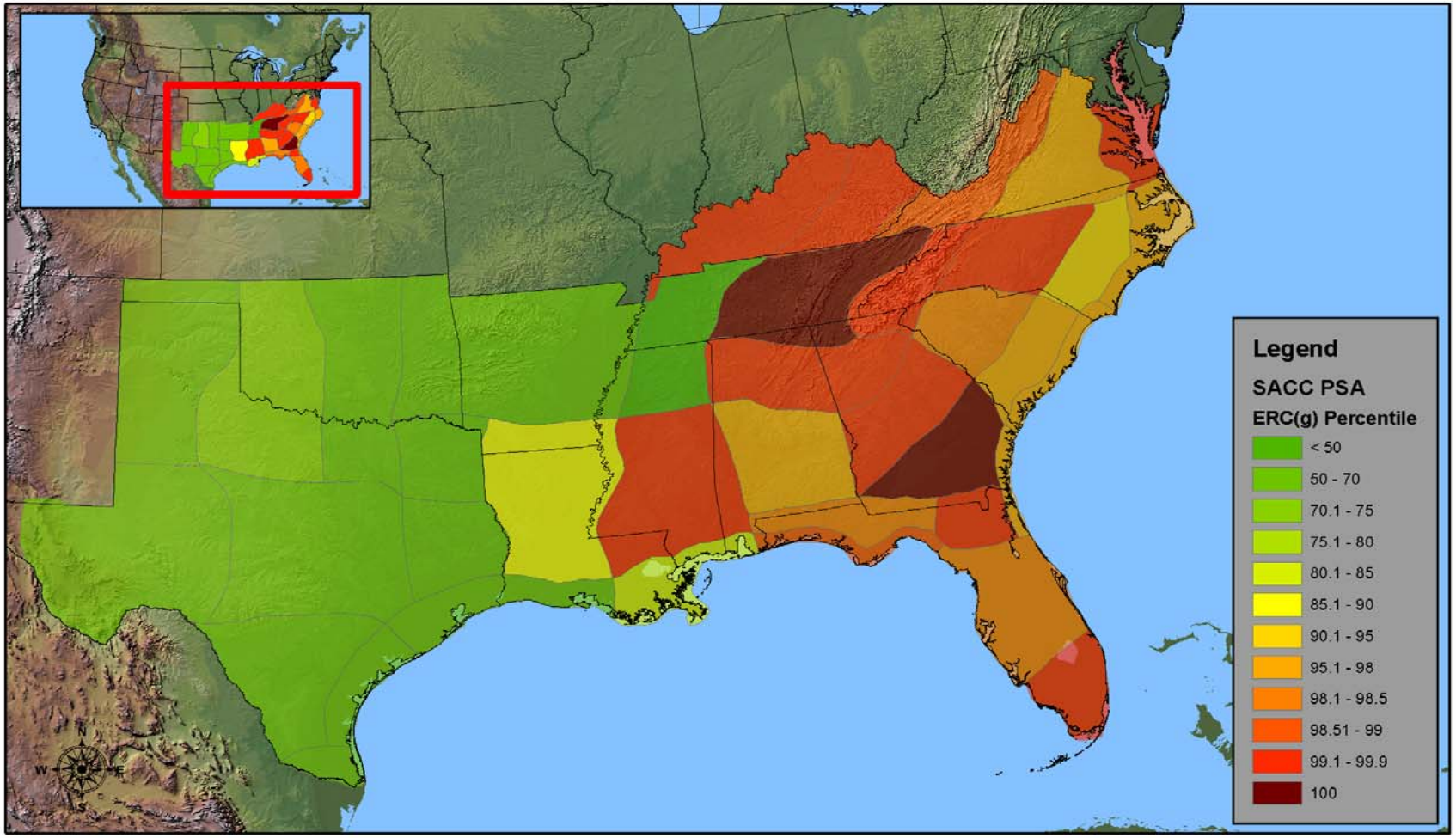
- Anticipate any ignition in all size classes of dead fuels to ignite easily and move rapidly.
- Anticipate short to long range spotting from intense surface fires, torching trees and areas of active crowning.
- Anticipate large acres to be consumed in a short period of time.
- Shrub and young stand components in some areas may under burn pre-drying crowns and leaving them available for re-burn at a later time.
- As the live fuel moisture values fall with continued drying, fires will burn with more intensity and fire behavior will become more extreme.
- Due to current and forecasted fuel moisture values, extreme fire behavior will occur under lower wind speeds, higher humidity values and lower temperature thresholds than normal.
- Traditional breaks and barriers in muck soils, wetlands, and roadways are not dependable to slow or stop fire spread.

Mitigation Measures:

- Indirect tactics including burnouts under favorable conditions will have to be used more frequently this year.
- Aerial support will be needed more often to slow the rate of spread and cool the edges of the fire and control spotting.
- Ensure firefighters have good anchor points, escape routes, and safety zones.
- Have adequate numbers of Field Observers who understand the effects of weather changes and the current fuel conditions with a view of the flaming front and spot fires of concern.

Area of Concern: See attached map for areas of concern.

Energy Release Component (g) Percentiles (28 May 2007)



SACC Risk Assessment Team, 29 May 2007 1400

Energy Release Components for fuel model G, expressed as a percentile of their historical value. High values indicate areas where current ERC values are meeting or exceeding historical values for that area.